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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/560,121	04/28/2000	Todd A. Merritt	303.626US1	3391

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EXAMINER

WELLS, KENNETH B

ART UNIT PAPER NUMBER

2816

DATE MAILED: 02/11/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/560,121

Applicant(s)

MERRITT, TODD A.

Examiner

Kenneth B. Wells

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 April 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>13</u> . | 6) <input type="checkbox"/> Other: |

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1. The amendment filed on 9/03/02 has been received and entered in the case.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. The claims are objected to because of the following informalities: in claim 4, lines 5-6, the recitations of "first and second preboot capacitors" and "first and second main pump capacitors" lack clear antecedent basis because these elements have already been set forth in claim 3 from which claim 4 depends. The same type of problem exists for "first and second precharge capacitors" on line 1 of claim 12, and "a second predetermined level" on line 5 of claim 12, since these recitations have also already been set forth in claim 5, from which claim 12 depends. Note the same problem with regard to "a third predetermined level" on lines 4-5 of claim 15. In claim 14, it is unclear to recite that the first and second precharge capacitors "comprise" transistors. Also note that the word "comprising" is grammatically incorrect on line 2. Claims 17-42 are seen to include many other grammatical and/or antecedent

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basis problems that should be corrected as well. Appropriate correction is required.

4. The drawings are objected to because the black boxes in Figs. 10-13 need text labels. See 37 CFR 1.84(o). Correction is required.

5. Claims 1-5, 7, 8, 10, 12, 14, 15, 17, 19-26 and 35-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Merritt, USP 5,828,095.

Note Fig. 9, where the recited "plural phase generators" are formed by the elements within circuit 1020; the "first and second preboot capacitors" are elements 1380 and 1410; the "first and second main pump capacitors" are elements 1480 and 1500; the "first and second pre-boot precharge capacitors" are elements 1640 and 1660; and the "first and second gating devices" are any two of the switching FETs in the figure. The primary and secondary phase generators of claim 5 are formed by any combination of circuits 1100, 1020 and the remaining gates to the left of capacitors 1640 and 1660 in the figure. The "sharing transistors" of claim 41 are FETs 1920 and 1940.

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6. Claims 3, 5, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Cha.

Note Fig. 2, where the recited "plural phase generators" are the elements 16 and INV9 ; the "first and second preboot capacitors" are elements C1 and C3; the "first and second main pump capacitors" are elements C2 and C4; and the "first and second gating devices" are any two of the switching FETs in the figure.

7. Claims 6, 9, 11, 13, 16, 18 and 27-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merritt.

The claims reciting the specific power supply level (e.g., 1 to 2.5 volts) or delay time (e.g., 10 to 30 nanoseconds) are deemed to be obvious design expedients to those having ordinary skill in the art, since the skilled artisan will easily recognize that a supply voltage can be set to any desired value, as can the amount of delay of a delay element, without any unexpected results.

Claims 27-34 are also obvious modifications to Merritt because those skilled in the art will also recognize that the charge pump of Merritt is for use in any IC environment where a

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pumped voltage above the available supply voltage is required or desired.

8. Applicant's arguments filed on 9/3/02 have been fully considered but they are not persuasive.

The first argument is that Merritt does not disclose plural phase generators. This argument is not persuasive because it is incorrect, i.e., the signals output from circuit 1020 are clearly complementary (by the action of inverter 1120) and thus there must be plural phase generators included therein.

The next argument is that the capacitors 1380 and 1410 in Merritt are not first and second preboot capacitors. This argument is not persuasive because it is again incorrect, i.e., these capacitors are included in circuits 1040 which are described as "phase boot circuits" by the reference.

The next argument is that the capacitors 1480 and 1500 in Merritt are not first and second main pump capacitors. This argument is not persuasive because there is nothing in the claims that would preclude interpreting them as "main" capacitors, i.e., any of the capacitors in Merritt's Fig. 9 can be interpreted as "main" capacitors since applicant does not define anything

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specific about his "main" capacitors (what makes them "main" capacitors as opposed to some other type of capacitors?)

The same is true for the argument that the pre-boot capacitors 1640 and 1660 in Merritt cannot be considered "pre-boot pre-charge capacitors". The examiner disagrees with applicant's position because the claims include nothing to preclude such an interpretation. If applicant's pre-boot pre-charge capacitors perform a function different from capacitors 1640 and 1660 in Merritt, then such function should be included in the claims.

The next argument is that instant claim 5 "recites both primary and secondary phase generators that each generate two logical phase signals, for a total of four logical phase signals". This argument is not persuasive because claim 5 does not in fact recite this.

The arguments with regard to the Cha reference are similarly not persuasive. Moreover, the request for a reference or affidavit in response to the design choice rejection based on Cha or Merritt is not appropriate because the examiner did not take "official notice" in this instance, and thus a request for a reference or affidavit is not a proper response, see MPEP 2144.05.

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9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B. Wells whose telephone number is 703-308-4809. The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan, can be reached at 703-308-4876. The fax phone numbers for TC2800 are 703-872-9318 (before final) and 703-872-9319 (after final).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is 703-308-0956.



Kenneth B. Wells
Primary Examiner
Art Unit 2816

February 10, 2003